

5. List of the Species of *Fulgora*, with Descriptions of New Forms in the Collection of the British Museum. By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

[Received December 9, 1873.]

(Plate XV.)

Dr. Stål has very rightly restored the designation *Fulgora* to the group of Homopterous insects comprising the genus *Hotinus* of Amyot and Serville; this genus is confined to the Old World, most of the species occurring in the Eastern Archipelago.

The following list contains the whole of the species at present known to science, with descriptions of three beautiful new species in the National Collection; the number of species now amounts to twenty-eight.

Sect. 1. *Species with (when dead) orange wings.*

1. FULGORA CANDELARIA.

Laternaria candelaria, Linnæus, Mus. Lud. Ulr. p. 153. n. 2; Act. Stockh. p. 63, pl. 1. figs. 1, 5, 6 (1746).

Fulgora candelaria, Linnæus, Syst. Nat. i. 2, p. 70. n. 33; Roesel, Ins.-Belust. 2, Loc. 189, pl. 30 (1749).

Flata candelaria, Germar, Mant. Ent. iii. p. 189. n. 1.

Pyrops candelaria, Spinola, Ann. Soc. Ent. France, viii. p. 233. n. 1 (1839).

Hotinus candelarius, Amyot & Serville, Hist. Nat. Hém. p. 490. n. 1.

Hong-Kong (*Bowring*); Cambodia.

B.M.

2. FULGORA CYANIROSTRIS.

Fulgora cyanirostris, Guérin, Ann. Soc. Ent. France, 2nd ser. iii. Bull. Ent. p. 96.

Hotinus cyanirostris, Walker, List Homopt. Ins. ii. p. 265. n. 2 (1851).

Java.

3. FULGORA BREVIROSTRIS, n. sp. (Plate XV. fig. 1.)

Closely allied to *F. candelaria*; tegmina black, with the nervures and spots bright ochreous, disposed as in *F. candelaria*; wings orange-ochreous, the apical third black; rostrum short, curved, ascending, testaceous, with paler spots; prothorax much compressed in front, with a central longitudinal ridge and two strongly impressed black punctures; testaceous, with a black lateral patch; the rest of the body luteous above, mesothorax maculated with black; abdomen below black, the margins of the segments testaceous; legs pitchy; the coxæ, and the femora of the last pair, dirty testaceous. Length

of body, including rostrum, 1 inch 2 lines, rostrum 6 lines; expanse 2 inches 6 lines.

Penang (*Bowring*).

B.M.

Perhaps a local race of *F. candelaria*, but unquestionably more distinct than *F. viridirostris* and *F. nigrirostris*. An example, labelled "India," from Mr. Saunders's collection, differs from the type in having the rostrum of a pitchy colour. The rostrum in this species is shorter than in *F. viridirostris*.

4. FULGORA VIRIDIROSTRIS.

Pyrops viridirostris, Westwood, Orient. Entom. pl. 3. fig. 4 (1848).

Hotinus viridirostris, Walker, List Homop. Ins. ii. p. 265. n. 3 (1851).

Assam (*Warwick*).

B.M.

5. FULGORA NIGRIROSTRIS.

Hotinus nigrirostris, Walker, Ins. Saund. p. 29 (1858).

Pachebon (*Mouhot*).

B.M.

6. FULGORA SPINOLÆ.

Fulgora spinolæ, Westwood, Ann. & Mag. Nat. Hist. ix. p. 118 (April 1842); Orient. Ent. pl. 36. fig. 1 (1848).

Hotinus spinolæ, Walker, List Homopt. Ins. ii. p. 266. n. 4 (1851).

Silhet (*Stainsforth*, *Sowerby*, *Leadbeater*).

B.M.

7. FULGORA LATHBURII.

Fulgora lathburii, Kirby, Trans. Linn. Soc. xii. p. 450. n. 97; Guérin, Icon. Règn. Anim. Ins. pl. 58. fig. 2.

Flata lathburii, Germar, Thom. Arch. ii. 2, p. 46 (1830).

Hotinus lathburii, Walker, List Homopt. Ins. ii. p. 266. n. 5 (1851).

Hong-Kong (*Bowring*).

B.M.

Sect. 2. Species with white wings.

8. FULGORA CLAVATA.

Fulgora clavata, Westwood, Linn. Trans. xviii. p. 139. n. 7, pl. 12. fig. 1; Cab. Orient. Ent. pl. 3. fig. 1 (1848).

Hotinus clavatus, Walker, List Homopt. Ins. ii. p. 267. n. 12 (1851).

Silhet (*Stainsforth*); Assam (*Warwick*); N. India, E. India.

B.M.

The rostrum of this insect has a perfectly ludicrous resemblance to a "vesuvian" cigar-light.

9. FULGORA PONDEROSA.

Hotinus ponderosus, Stål, Öfv. Kongl. Vetensk. Akad. Förhandl. xi. p. 244 (1854).

Hindustan, sp. ead.?

B.M.

I believe this to be merely a faded specimen of one of the many varieties of *F. clavata*; we have an example from Silhet, and a second without a locality, which agree very fairly with Stål's description.

Sect. 3. *Species with red and whitish wings.*

10. FULGORA OCLATA.

Fulgora oculata, Westwood, Trans. Linn. Soc. xviii. p. 142. n. 13, pl. xii. fig. 5; Cab. Orient. Ent. pl. 36. fig. 2 (1848).

Hotinus oculatus, Walker, List Homopt. Ins. ii. p. 267. n. 9 (1851).
Malacca. B.M.

11. FULGORA SUBOCELLATA.

Fulgora subocellata, Guérin, Rev. Zool. (1839); Delessert, Souv. Voy. Inde, p. 66, pl. 16. fig. 1 (1842).

Hotinus subocellatus, Walker, List Homopt. Ins. ii. p. 267. n. 10 (1851).

Penang. B.M.
Possibly a variety of *F. oculata*.

12. FULGORA SULTANA.

Hotinus sultanus, Adams, Proc. Zool. Soc. 1847, p. 83; Ann. & Mag. Nat. Hist. xx. p. 204 (1847).

"Forest of Borneo near Tampasook," *A. Adams*; 'Corea' (*A. Adams*). B.M.

Mr. Walker states in his catalogue that our example is from Borneo. It is registered as from Corea with other insects from that locality; Borneo, however, is written upon the label attached to the specimen: the latter differs slightly from the example described.

13. FULGORA GIGANTEA, n. sp. (Plate XV. fig. 2.)

Closely allied to *F. sultana*, but altogether larger; corium of tegmina black, area beyond dirty testaceous; veins ochreous, base bright ochreous; two parallel series of transverse oval pale ochreous spots; ten or eleven indistinct ochreous spots with whitish zones beyond corium; wings with apical two fifths pitchy, paler at apex; basal three fifths rosy to centre, and then becoming pale testaceous to abdominal margin; rostrum reddish luteous above, bright testaceous at tip and below, rest of the body testaceous. Length of body, including rostrum, 2 inches; of rostrum 10 lines; expanse 4 inches 6 lines.

Sarawak (*Wallace*). B.M.

The example upon which I have founded the present species formerly stood in Mr. Saunders's Collection as the *Hotinus sultana* of White; it is, however, quite distinct; it is the largest species yet described.

Sect. 4. *Species with blue-green wings.*

14. FULGORA PYRORHYNCHA.

Fulgora pyrorhynchus, Donovan, Ins. Ind. Hom. pl. 7. fig. 1.

Hotinus pyrorhyncus, Walker, List Homopt. Ins. ii. p. 267. n. 8 (1851).

Fulgora pyrorhina, Westwood, Donovan. Ins. Ind. 2nd edit. p. 13.

Fulgora rajah, Guérin, Rev. Zool. p. 183 (1839).

Nepaul (*Hodgson*).

B.M.

15. FULGORA DUCALIS.

Hotinus ducalis, Stål, Trans. Ent. Soc. 3rd ser. vol. i. p. 576. n. 2 (1863).

Cambodia (*Mouhot*).

Type, B.M.

16. FULGORA CÆLESTINA.

Hotinus cælestinus, Stål, Trans. Ent. Soc. 3rd ser. vol. i. p. 576. n. 1 (1863).

Cambodia (*Mouhot*).

B.M.

17. FULGORA MACULATA.

Fulgora maculata, Olivier, Enc. Méth. vi. p. 568. n. 5 (1791); Stoll, Cic. p. 98, pl. 26. fig. 143.

Flata maculata, Germar, Thon, Arch. ii. 2, p. 46 (1830).

Hotinus maculatus, Walker, List Homopt. Ins. ii. p. 266. n. 7 (1851).

Var. *Hotinus fulvirostris*, Walker, *l. c.* Suppl. p. 41 (1858).

Ceylon (*Paul & Cuming*).

B.M.

18. FULGORA INTRICATA.

Hotinus intricatus, Walker, Journ. Linn. Soc. Zool. p. 142. n. 13 (1857).

Borneo; Sarawak (*Wallace*).

Attached to our specimen was a label, bearing the designation *T. tetrachroma*, Walker; but it appears to be a MS. name.

19. FULGORA STELLATA, n. sp. (Plate XV. fig. 3.)

Closely allied to *F. intricata*, Walker, darker in colour; the tegmina shorter, with more arched costal margin; the three basal bands broken up into ochraceous spots; wings deeper-coloured, the green area rather smaller. Length of body, including rostrum, 1 inch 8 lines, of rostrum 9 lines; expanse 3 inches 1 line.

Labuan (*Collingwood*).

Two specimens, B.M.

A third discoloured example from Mr. Saunders's cabinet is also in the Collection; like the discoloured examples of *F. maculata* (*Hotinus fulvirostris*, Walker), it has the wings pale testaceous at base; I suspect that all such specimens have come over in spirits.

20. FULGORA DELESSERTII.

Fulgora delessertii, Guérin, Rev. Zool. 183 (1839); Delessert, Souv. Voy. Inde, p. 66, pl. 16. fig. 2 (1842).

Malabar coast (*Ward*).

B.M.

This species has a short and somewhat compressed rostrum.

Subgenus. *Rostrum much compressed from near base to apex.*

21. FULGORA GUTTULATA.

Fulgora (Pyrops) guttulata, Westwood, Ann. & Mag. Nat. Hist. ix. p. 119 (1842).

Fulgora (Hotina) guttulata, Westwood, Orient. Ent. pl. iii. fig. 3 (1848).

Pyrops guttulata, Walker, List Homopt. Ins. ii. p. 269. n. 4 (1851).

India.

B.M.

The wings are bright green in fresh specimens, not cream-coloured, as in Westwood's figure.

22. FULGORA GEMMATA.

Pyrops gemmatus, Westwood, Cab. Orient. Ent. pl. 3. fig. 2 (1848).

Hotinus gemmatus, Walker, List Homopt. Ins. ii. p. 267. n. 13 (1851).

Darjeeling, N. India, E. India.

B.M.

Sect. 5. *Species with scarlet wings.*

23. FULGORA COCCINEA.

Hotinus coccineus, Walker, List Homopt. Ins. Suppl. p. 42 (1858).

Ceylon (*Cuming*).

B.M.

24. FULGORA DECORATA.

Fulgora decorata, Westwood, Trans. Linn. Soc. xviii. p. 141. n. 12, pl. xii. fig. 4 (1841).

Prolepta decorata, Walker, List Homopt. Ins. ii. p. 270. n. 2 (1851).

"Java" (*Westwood*).

Certainly not a *Prolepta*, but very close to the *Hotinus coccineus* of Walker.

25. FULGORA GUTTIFERA.

Hotinus guttifer, Stål, Öfvers. Vetensk. Akad. Förhandl. xv. p. 448. n. 1 (1859).

"Ceylon" (*Stål*); sp. ead.? Shanghai.

B.M.

The description of this species is rather vague:—"tegminibus carneis, nigro conspersis, guttis compluribus minoribus anguste nigro-cinctis ornatis." It is difficult to imagine the colour of the *smaller* spots; in our insect they are *larger* than the black spots, orange, and edged with black.

26. FULGORA PYRRHOCHLORA.

Hotinus pyrrhochlora, Walker, MS.? *

Sarawak (*Wallace*).

B.M.

* Mr. Walker believes that he has described this species; but I have not succeeded in finding the description.

The same form as *F. virescens*, but the tegmina greener, with less numerous orange spots and with a yellow costal margin; wings scarlet. Length of body, exclusive of rostrum, 9 lines, of rostrum —?; expanse 2 inches 3 lines.

Sect. 6. *Species with pale greenish wings (subhyaline).*

27. FULGORA VIRESCENS.

Fulgora (Pyrops) virescens, Westwood, Ann. & Mag. Nat. Hist. ix. p. 119 (1842).

Fulgora (Hotina) virescens, Westwood, Orient. Ent. pl. iii. fig. 5 (1848).

Pyrops virescens, Walker, List Homopt. Ins. ii. p. 269. n. 5 (1851).

Hotinus semiannulus, Walker, List Homopt. Ins. Suppl. p. 42 (1858).

Cherra; N. India.

B.M.

28. FULGORA CULTELLATA.

Hotinus cultellatus, Walker, Journ. Linn. Soc. Zool. i. p. 143. n. 14 (1857).

Borneo.

Seems allied to *F. virescens* of Westwood.

DESCRIPTION OF PLATE XV.

Fig. 1. *Fulgora brevirostris*, p. 97.

2. — *gigantea*, p. 99.

3. — *stellata*, p. 100.

6. A List of the Lepidopterous Insects collected by Mr. L. Layard at Chentaboon and Nahconchaisee, Siam, with Descriptions of new Species. By HERBERT DRUCE, F.L.S., F.Z.S.

[Received December 23, 1873.]

(Plate XVI.)

This collection is interesting because it contains several species that we have only previously known from the Malayan region. It appears that Chentaboon is a most prolific locality. It is a mountainous and thickly wooded district 200 miles from Bangkok, on the east coast of the Gulf of Siam. All the butterflies from this place were collected during the month of September 1872. Those from Nahconchaisee, a flat clayey district, 18 miles from Bangkok, covered with long yellow grass, were obtained during the last few months of 1872.

The collection contained seventy-nine species (six of which I have described as new), representing 4 families, 6 subfamilies, and 40 genera, of which 38 species are from Chentaboon, and 24 from Nahcon-